

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (currently amended) A current-sense bias circuit for use with a magnetoresistive head, comprising:

a voltage biasing portion configured to provide a bias voltage across said magnetoresistive head thereby establishing a bias current through said magnetoresistive head where said bias current subtracts current from a first current path to a supply voltage node and adds current to a second current path to said supply voltage node; and

a current sensing portion coupled to said voltage biasing portion and configured to sense a change in said bias current based on a resistivity change of said magnetoresistive head.

Claim 2 (original) The current-sense bias circuit as recited in Claim 1 wherein said bias voltage is provided by first and second bipolar transistors.

Claim 3 (original) The current-sense bias circuit as recited in Claim 2 wherein said magnetoresistive head interposes first and second emitters of said first and second bipolar transistors.

Claim 4 (original) The current-sense bias circuit as recited in Claim 2 wherein a source for said bias voltage interposes first and second bases of said first and second bipolar transistors.

Claim 5 (currently amended) The current-sense bias circuit as recited in Claim 1 wherein said change in said bias current employs first and second current

sources with said first current source in said first current path and said second current source in said second current path.

Claim 6 (original) The current-sense bias circuit as recited in Claim 1 wherein said change in said bias current provides a proportional differential voltage.

Claim 7 (original) The current-sense bias circuit as recited in Claim 6 wherein first and second resistors are employed to develop said proportional differential voltage.

Claim 8 (currently amended) A method of sensing a current for use with a magnetoresistive head, comprising:

providing a bias voltage across said magnetoresistive head thereby establishing a bias current through said magnetoresistive head where said bias current subtracts current from a first current path to a supply voltage node and adds current to a second current path to said supply voltage node ; and

sensing a change in said bias current based on a resistivity change of said magnetoresistive head.

Claim 9 (original) The method of sensing a current as recited in Claim 8 wherein said providing said bias voltage employs first and second bipolar transistors.

Claim 10 (original) The method of sensing a current as recited in Claim 9 wherein said providing said bias voltage employs said magnetoresistive head interposed first and second emitters of said first and second bipolar transistors.

Claim 11 (original) The method of sensing a current as recited in Claim 9 wherein said providing said bias voltage employs a source for said bias voltage interposed first and second bases of said first and second bipolar transistors.

Claim 12 (currently amended) The method of sensing a current as recited in Claim 8 wherein said sensing said change in said bias current employs first and second current sources with said first current source in said first current path and said second current source in said second current path.

Claim 13 (original) The method of sensing a current as recited in Claim 8 wherein said sensing said change in said bias current provides a proportional differential voltage.

Claim 14 (original) The method of sensing a current as recited in Claim 13 wherein said sensing said change in said bias current employs first and second resistors to develop said proportional differential voltage.

Claim 15 (currently amended) A hard disk drive system, comprising:

- a motor;
- a storage medium coupled to said motor for rotation thereby;
- a magnetoresistive read head proximate at least one surface of said storage medium; and
- a current-sense bias circuit for use with said magnetoresistive read head, including:
  - a voltage biasing portion that provides a bias voltage across said magnetoresistive read head thereby establishing a bias current through said magnetoresistive read head where said bias current subtracts current from a first current path to a supply voltage node and adds current to a second current path to said supply voltage node, and
  - a current sensing portion, coupled to said voltage biasing portion, that senses a change in said bias current based on a resistivity change of said magnetoresistive read head.

Claim 16 (original) The hard disk drive system as recited in Claim 15 wherein said bias voltage is provided by first and second bipolar transistors.

Claim 17 (original) The hard disk drive system as recited in Claim 16 wherein said magnetoresistive head interposes first and second emitters of said first and second bipolar transistors.

Claim 18 (original) The hard disk drive system as recited in Claim 16 wherein a source for said bias voltage interposes first and second bases of said first and second bipolar transistors.

Claim 19 (currently amended) The hard disk drive system as recited in Claim 15 wherein said change in said bias current employs first and second current sources with said first current source in said first current path and said second current source in said second current path.

Claim 20 (original) The hard disk drive system as recited in Claim 15 wherein said change in said bias current provides a proportional differential voltage.

Claim 21 (original) The hard disk drive system as recited in Claim 20 wherein first and second resistors are employed to develop said proportional differential voltage.